



***nitrogen***



an Open Access Journal by MDPI

## **Alternatives to Mineral Nitrogen Fertilizers in Agriculture: State of the Art, Challenges and Future Prospects**

Guest Editor:

**Dr. Germán Tortosa**

Department of Soil Microbiology  
and Symbiotic Systems, Estación  
Experimental del Zaidín (EEZ),  
Consejo Superior de  
Investigaciones Científicas (CSIC),  
18008 Granada, Spain

Deadline for manuscript  
submissions:

**closed (15 November 2023)**

### **Message from the Guest Editor**

Dear Colleagues,

In order to develop an environmentally friendly agriculture, it seems mandatory to investigate alternatives that could result in a reduction in mineral N-fertilizers without compromising yield productivity. In this Special Issue, we invite the scientific community to share their investigations related to the minimization of environmental impacts of nitrogen application in agriculture and the optimization of fertilization. Research articles and reviews including agronomic, chemical, biological or multidisciplinary aspects covering these topics (but not limited to) are also welcome:

- Biological and symbiotic nitrogen fixation;
- Legume crops or Vegetation cover;
- Environmental contamination of nitrogen fertilizers;
- Nitrogen emissions (NH<sub>3</sub>, N<sub>2</sub>O, NO or N<sub>2</sub>);
- Manure and organic fertilisers;
- Enhanced-efficiency nitrogen fertilisers;
- Nitrogen transformation in organic waste treatments: composting, vermicomposting and anaerobic digestion;
- New technologies for nitrogen recovering from organic waste;
- N-cycle in soils: nitrification, denitrification, etc.



[mdpi.com/si/103516](https://mdpi.com/si/103516)

Dr. Germán Tortosa  
*Guest Editor*

**Special** *Issue*



# ***nitrogen***



an Open Access Journal by MDPI

## **Editor-in-Chief**

### **Prof. Dr. Stephen Macko**

Department of Environmental  
Sciences, University of Virginia,  
Charlottesville, VA 22903, USA

## **Message from the Editor-in-Chief**

*Nitrogen*, the element that is intimately associated with essentially all processes on Earth, is the broad focus of a new online, open access journal. The intention of this publication is to offer a venue for research papers, reviews, short notes, and communications that have as a nexus this critical element.

## **Author Benefits**

**Open Access:** free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility:** indexed within [ESCI \(Web of Science\)](#), [Scopus](#), [CAPus / SciFinder](#), and [other databases](#).

**Rapid Publication:** manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.5 days after submission; acceptance to publication is undertaken in 3.2 days (median values for papers published in this journal in the second half of 2023).

## **Contact Us**

---

*Nitrogen* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/nitrogen](https://mdpi.com/journal/nitrogen)  
[nitrogen@mdpi.com](mailto:nitrogen@mdpi.com)  
[X@Nitrogen\\_MDPI](#)